

APPENDIX EE - Landscaping

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Sample of a "ONE-LINER" for Item 2.5a of the CTC Book

March 7, 1994

04-SCL-280, 6.6/19.5 (4.1/12.2)
04162-128571
HA25 RAS

[Dist.-Co.-Rte., KP(PM)]
(EA)
(Program Identification)

This project will upgrade 42 hectares of existing manual irrigation systems to automatic operation and rehabilitate planting areas.

Sample of a SUPPORTING FACT SHEET for Caltrans' Presentation to the CTC for Item 2.5a Projects

March 24, 1994

FACT SHEET Highway Planting Restoration (HA25)

4-SM-101
28.5/32.3 (17.8/20.2)
4163-135011

In San Mateo County in and near Burlingame and Millbrae from 0.3 kilometers South of Millbrae Avenue Overcrossing to 0.5 kilometers South of San Bruno Avenue Overcrossing.

PROPOSAL - This project will convert the existing highway planting irrigation system from potable to reclaimed water. The project includes the development of a reclaimed water supply system that includes the installation of a pump and supply lines, the automation of a manual irrigation system, and modification of the automatic irrigation systems.

WATER SUPPLY - The Millbrae Water Pollution Control Plant is the reclaimed water source. As producer of the reclaimed water, Millbrae will comply with all applicable requirements of the California Regional Water Quality Control Board, California Department of Health Services, and any other federal, State or local agency with jurisdiction over reclaimed water production and use.

NEED AND JUSTIFICATION - This project meets the requirements of the Streets & Highways Code; Division 1, Chapter 1, Article 3, Section 92.3 (b) for reclaimed water use. Caltrans is committed to use reclaimed water for irrigating highway planting whenever the reclaimed water is available, meets health codes, and cost is reasonable. Use of reclaimed water contributes to Caltrans' State-wide water conservation effort.

COST FOR PROJECT - The capital outlay for this project is \$376,000. Approximately \$9,000 of the total cost will be contributed by the City of Millbrae. A Cooperative Agreement will be executed prior to April 1994 between the State and the City of Millbrae.

SUPPORT FOR THIS PROJECT - The City of Millbrae supports the goals of this project to irrigate highway planting with reclaimed water.

CATEGORY 11, CTC Planting Policy; G-85-9

Cost Justification for Nonpotable Water Use

Cost Justification for Nonpotable Water Use



Project Description

Dist: _____	Co: _____	Date: _____
Rte(s): _____	PM: _____	EA: _____
Description: _____		

Summary

A. Estimated Project Cost Using Potable Water (Row 1)	\$0
B. Estimated Project Cost Using Nonpotable Water	\$0
C. Maximum Allowable Project Cost Using Nonpotable Water (Row 18)	\$0
• If "B" is less than or equal to "C" then nonpotable water costs are justified.	

Worksheet - HB32 and HA25 Projects

1	Estimated Project Cost Using Potable Water (include 20% contingencies)		\$0
2	Project Size (ha) (ac x .40469)	0.00 (0 ac)	
3	Annual Irrigation Rate (cubic meters/ha) (acft/ac x 3,047.99)	0.00 (0.00 acft/ac)	
4	Annual Water Usage (cubic meters) (Row 2 x Row 3)	0 (0 acft)	
5	Cost of Potable Water per cubic meter (\$/acft/1,233.49)	\$0.00 (\$0 \$/acft)	
6	Cost of Potable Water per Year (Row 4 x Row 5)	\$0	
7	Cost of Nonpotable Water per cubic meter (\$/acft/1,233.49)	\$0.00 (\$0 \$/acft)	
8	Cost of Nonpotable Water per Year (Row 4 x Row 7)	\$0	
9	20th Year Potable Water Costs (Row 6 x 2.437)		\$0
10	Average Annual Potable Water Cost Over 20 Years ((Row 6 + Row 9) / 2)		\$0
11	20th Year Nonpotable Water Costs (Row 8 x 2.437)		\$0
12	Average Annual Nonpotable Water Cost Over 20 Years ((Row 8 + Row 11) / 2)		\$0
13	Life Cycle Savings ((Row 10 - Row 12) x 20)		\$0
14	Estimated Cost of Potable Irrigation System (include 20% cont.) (all irrigation items including water meters, assessment fees, etc.)	\$0	
15	Estimated Value of Existing Irrigation System (HA25 projects only)	\$0	
16	Total Cost/Value of Potable Irrigation System (Row 14 + Row 15)		\$0
17	Additional 25% Permissible for Using Nonpotable Water (Row 16 x 25%)		\$0
18	Maximum Allowable Project Cost Using Nonpotable Water (Row 1 + Row 13 + Row 17)		\$0

Notes

Row 1: Include all planting and potable water irrigation items.
Rows 9 & 11: Using a 4.8% inflation rate, water cost in the 20th year is 2.437 times first year.
Row 13: Life cycle savings is based on 20 year projection.
Row 14: Use current cost/ha allowance; for '94 use \$55,600/ha (\$22,500/ac) x 0.6 if itemization is not possible.
Row 15: Estimate should include that portion of irrigation system to remain operational. (If existing irrigation is to remain operational in its entirety, use current cost/ha allowance; for '94 use \$55,600/ha ((\$22,500/ac)) x 0.6 x project ha)

30399
NPWJST.MAS



Outline for Design Intent Statement (DIS) (Highway Planting) (Highway Planting Restoration)

Plants

Provide a short description of (1) the reason/purpose for the planting, (2) the visual concept, (3) functional requirements, and (4) number of hectares planted. Address each of the following design items: discuss the type, reason used, and maintenance requirements.

- Ground Cover
- Revegetation
- Shrubs
- Inert materials
- Trees
- Low-visibility areas
- Wildflowers
- Non-planted areas

Nonpotable Water Use

When the use of nonpotable water is proposed for irrigation, include the following information:

- Source
- Quality
- Quantity
- Reliability
- Price
- Availability
- Inspections
- Operational procedures
- Health/environmental considerations
- Future implications
- Testing of water quality, if required
- Impact on adjacent or nearby planting projects
- Cooperation with other potential users.
- Irrigation system: (overhead/basin watering, types of sprinklers and reason for use, type of controller, etc.)

Water Management

When a Remote Irrigation Control System (RICS) or automated irrigation sprinkler system is proposed, discuss the recommended water management practices that will be used to operate the new system utilizing existing maintenance resources. Include an analysis to address (1) how the proposed irrigation system will fit into the district's overall automatic irrigation management plan, (2) district expertise and ability to manage and operate the new system, and (3) training needs (including who will provide training).

Vegetation Management

Describe what strategies are being used for vegetation control (mulching, mowing, spraying, etc.). Caltrans' Vegetation Control Program has a goal to reduce the use of non-selective chemicals by 50% by the year 2000 and by 80% by 2012. Include a discussion of how the proposed design concept will help achieve this goal for chemical reduction.

Describe what installation procedures the Maintenance Unit should follow to help get plants established (e.g., staking, and protective cages).

Design for Safety

Include a discussion of proposed design for safety considerations including, but not limited to, the following:

- Replacement of aged and deteriorated plants
- Upgrading the irrigation systems from manual operation to automatic
- Conversion of quick-coupling valves to permanent fixed-head
- Relocating valve and supply lines away from traveled way
- Providing maintenance vehicle parking areas away from the traveled way
- Installation of new access gates next to frontage roads/city streets
- Conversion to nonpotable water and remote-control irrigation systems (RICS)
- Use of mulch to minimize vegetation control spraying
- Construction of access roads

----- SIGNATURES -----

_____ <i>PROJECT LANDSCAPE ARCHITECT</i> (responsible for project design)	_____ <i>DATE</i>	_____ <i>PHONE #</i>
_____ <i>DISTRICT LANDSCAPE ARCHITECT</i> (signature denotes concurrence)	_____ <i>DATE</i>	_____ <i>PHONE #</i>
_____ <i>DISTRICT LANDSCAPE SPECIALIST</i> (signature denotes concurrence)	_____ <i>DATE</i>	_____ <i>PHONE #</i>